CLAIMS

That which is claimed is:

1. A method for determining the ethnic origin of a male, comprising:

obtaining a nucleic acid sample from the male; and

identifying at least two polymorphic markers in the nucleic acid sample indicative of the ethnic origin of the male, using at least one primer pair from TABLE 1.

2. The method of claim 1, wherein the identifying of the polymorphic markers indicates the ethnic origin of the male as being at least one of the haplotype groups selected from the group consisting of haplotype Group I, Group II, Group III, Group IV, Group V, Group VI, Group VII, Group VIII, Group IX or Group X.

3. The method of claim 1, wherein at least one polymorphic marker identified is a polymorphic marker from TABLE 1.

4. The method of claim 3, wherein the polymorphic markers identifies a haplotype associated with a haplotype group selected from the group consisting of haplotype Group I, Group II, Group III, Group IV, Group V, Group VI, Group VII, Group VIII, Group IX or Group X.

5. The method of claim 3, wherein the polymorphic markers identify a sub-haplotype group for the ethnic origin of the male.

6. A method for identifying a plurality of polymorphic sites in a nucleic acid, comprising:

obtaining a sample of the nucleic acid from at least one individual; and

identifying, in the nucleic acid, at least one of the polymorphic sites in at least two polymorphic markers of TABLE 1.

7. The method of claim 6, wherein the sample of nucleic acid is obtained from a plurality of individuals, and wherein presence of the polymorphic markers in each sample of the nucleic acid is determined for each of the individuals.

8. The method of claim 7, further comprising testing each individual for presence of a group of polymorphic markers which identify the haplotype of each individual, wherein the haplotype is indicative of a geographic distribution of a population.

9. The method of claim 8, wherein the haplotype of each individual is indicative of the geographical distribution of an ancestral population for each individual.

10. A kit for determining ethnic origin of an individual, comprising at least two primer pairs capable of identifying at least two polymorphic markers from TABLE 1.

11. The kit of claim 10, further comprising a control nucleic acid for detecting the presence or absence of the polymorphic markers from TABLE 1.

12. A method for determining the ethnic origin of a human male individual, comprising:

obtaining a nucleic acid sample from the male;

testing the nucleic acid sample for presence of a plurality of polymorphic markers selected from TABLE 1;

identifying which polymorphic markers are present in the nucleic acid sample; and

assigning a haplotype group to the male based on the identified markers, wherein the haplotype group is indicative of the ethnic origin of the male.

13. The method of claim 12, wherein the polymorphic markers tested are markers M91, M60, M96, M174, M316, M89, M9, M175, M45, M173.

14. The method of claim 12, wherein the polymorphic markers tested are M91, M299, M249, M294, M203, M96, M316, M9, M74, M207, M214.

15. The method of claim 12, wherein the polymorphic markers tested are M304, M242, M269, M207, M74, M214, M9, M235, M316, M174, M299, M246, M249, M294 and M96.

16. The method of claim 12, wherein the polymorphic markers tested are M191, M135, M217, M201, M172, M267, M170, M52, M122, M268, M198, M3.

17. The method of claim 13, wherein the haplotype group is a haplotype group selected from the group consisting of haplotype Group I, Group II, Group III, Group IV, Group V, Group VI, Group VII, Group VIII, Group IX or Group X..

18. An isolated nucleic acid segment of a human Y chromosome comprising at least 10 contiguous bases including at least one polymorphic site from TABLE 1.

19. The isolated nucleic acid segment of claim 18 that is DNA.

20. The isolated nucleic acid segment of claim 18 that is RNA.

21. The isolated nucleic acid segment of claim 18 that is less than 50 bases.

22. The isolated nucleic acid segment of claim 18 that is less than 20 bases.

23. The isolated nucleic acid segment of claim 18 that is a probe, and wherein the polymorphic site occupies a central position of the probe.

24. A plurality of isolated nucleic acid primer pairs for amplification of a plurality of polymorphic regions of the Y chromosome from TABLE 1.

25. The primer pairs of claim 24, wherein the primer pairs are usable to amplify the polymorphic regions in a non-recombining region of the human Y chromosome.

26. The primer pairs of claim 24, wherein the primer pairs are configured for amplification of polymorphic regions indicative of ethnicity of men.

27. A method for determining the paternity of a human male individual, comprising:

obtaining a nucleic acid sample from the male ;

testing the nucleic acid sample for the presence of a plurality of polymorphic markers from TABLE 1;

identifying which polymorphic markers are present in the nucleic acid sample; and

comparing the identified polymorphic markers to a set of polymorphic markers identified in nucleic acid samples from potential fathers.